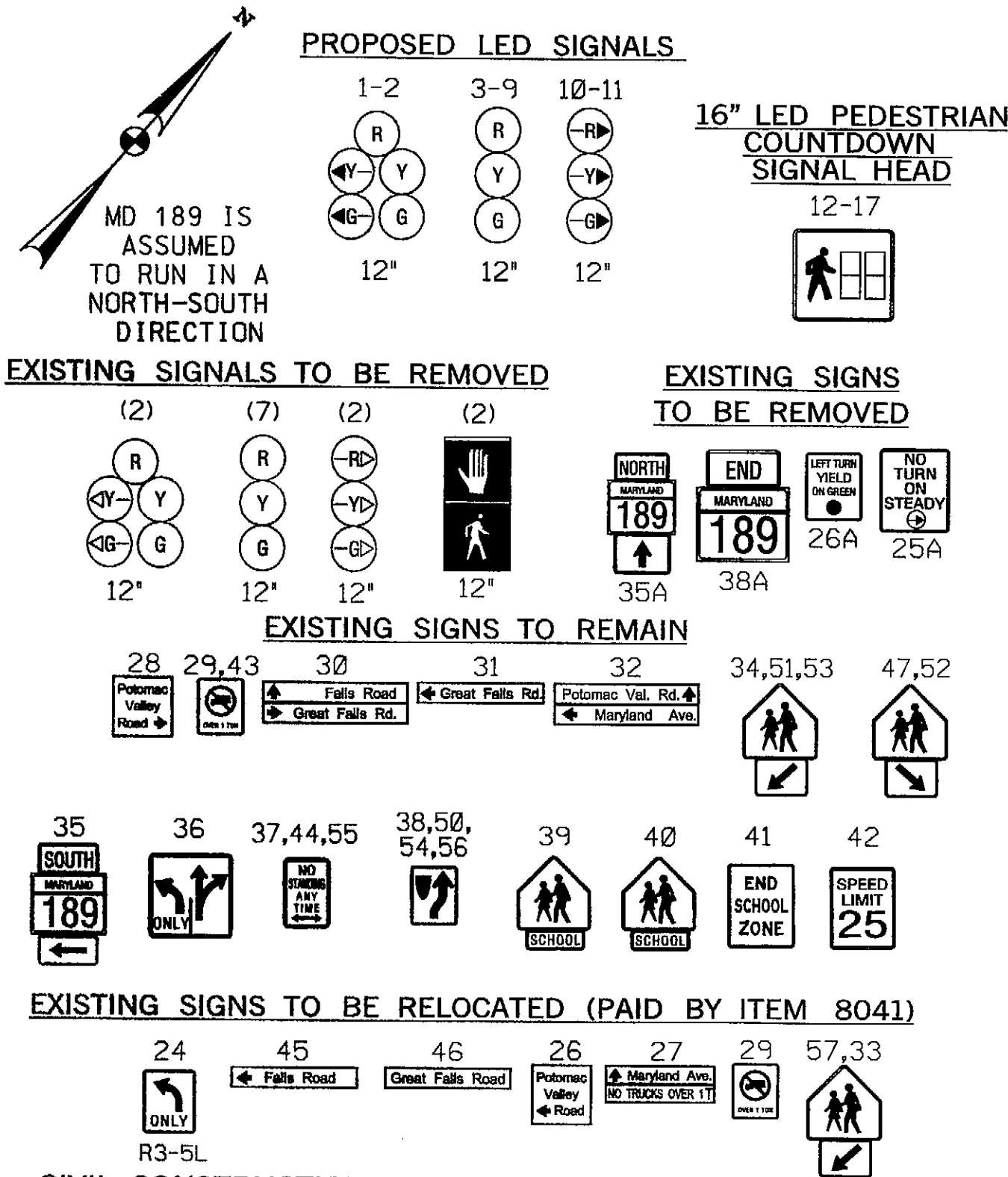


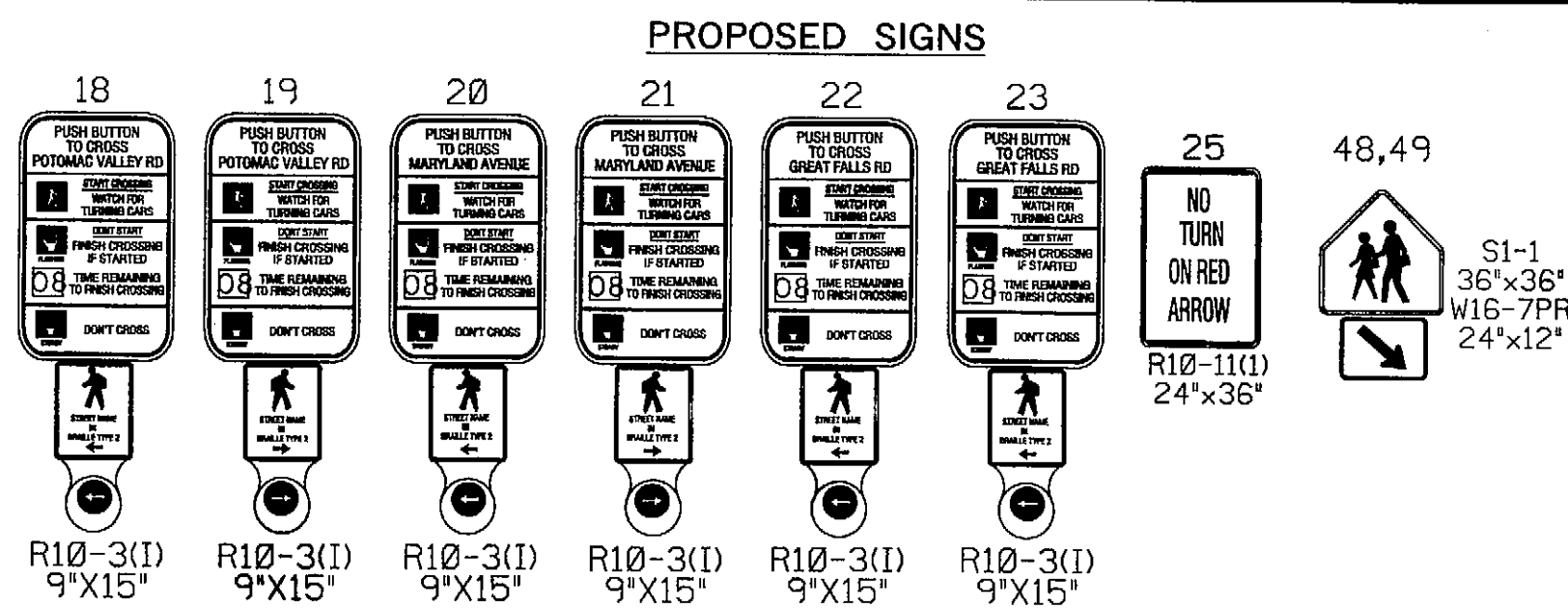
BY: Aaron Hottenstein Division: P088 Highway TrafficGMA Emp



**CIVIL CONSTRUCTION DETAILS**  
REFER TO SHEET NO. 3 OF 3

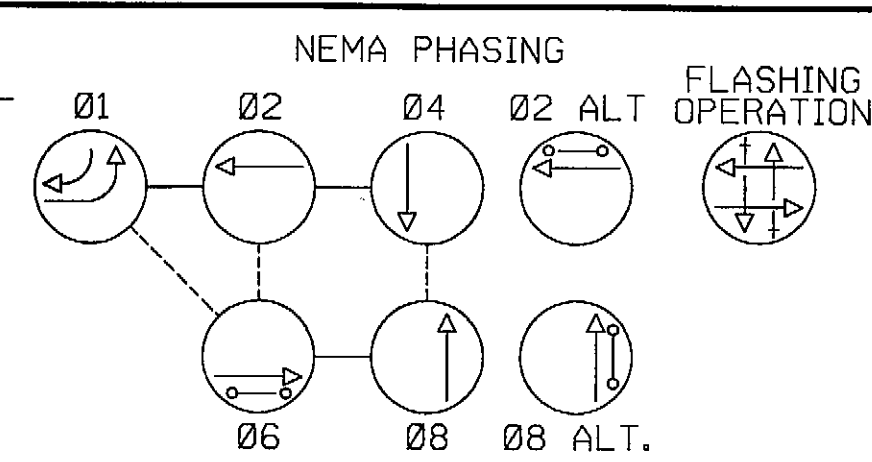
**TRAFFIC CONSTRUCTION DETAILS**

- A. INSTALL A NEMA SIZE S BASE MOUNTED CABINET WITH UNINTERRUPTABLE POWER SUPPLY, BATTERY PACK, AND CONTROLLER WITH ELECTRICAL UTILITY SERVICE EQUIPMENT FOR UNDERGROUND SERVICE. INSTALL APS CENTRAL CONTROL UNIT (NOTE: TWO 4 IN. AND TWO 2 IN. PVC SCHEDULE 80 CONDUIT BENDS)
- C. INSTALL ELECTRICAL HANDHOLE.
- D. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- E. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
- F. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- G. INSTALL CONCRETE FOUNDATION FOR A 27 FT. STEEL POLE WITH 40 FT. MAST ARM, TRAFFIC SIGNAL HEADS, VIDEO DETECTION CAMERA, 250 WPS LUMINAIRE WITH PHOTOCELL, 10' LIGHTING ARM AND SIGNS (NOTE: ONE 3 IN. PVC SCHEDULE 80 CONDUIT BEND).
- H. INSTALL 12 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR CROSSWALKS.
- I. INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS FOR STOP LINE.
- J. INSTALL MODIFIED CONCRETE FOUNDATION FOR 10 FT STEEL PEDESTAL POLE WITH BREAKAWAY COUPLINGS (MD STD. NO. 818.16-01), COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE TACTILE PUSHBUTTON STATION AND SIGN WITH ONE 2 IN. PVC SCHEDULE 80 CONDUIT BEND.
- K. USE EXISTING HANDHOLE.
- L. CAP AND ABANDON EXISTING CONDUIT.
- M. REMOVE EXISTING HANDHOLE.
- N. REMOVE EXISTING POLE, MAST ARM, POLE MOUNTED CONTROLLER, CABINET AND FOUNDATION 12 IN. BELOW THE GRADE AND BACKFILL.
- O. REMOVE EXISTING PAVEMENT MARKINGS.
- P. USE EXISTING CONDUIT.
- R. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- S. REMOVE EXISTING SIGN AND REINSTALL AFTER SIDEWALK CONSTRUCTION.
- T. ADJUST EXISTING HANDHOLE.
- U. REMOVE EXISTING TRAFFIC SIGNAL POLE.
- V. ABANDON EXISTING LOOP DETECTOR.
- W. REMOVE EXISTING SIGNS.
- X. USE EXISTING POLE AND MAST ARM AND REMOVE EXISTING TRAFFIC SIGNAL HEADS, INSTALL NEW LED SIGNAL HEADS AND VIDEO DETECTION CAMERA.
- Y. INSTALL GROUND MOUNTED SIGN.
- AA. USE EXISTING PEPCO POWER SOURCE, 3 IN. RISER ON PEPCO POLE (\*753452-8462)
- BB. INSTALL 27 FOOT STEEL POLE WITH 40' MAST ARM, 10 FOOT LIGHTING ARM, VIDEO DETECTION CAMERA, 250W HPS LUMINAIRE WITH PHOTOCELL, SIGNALS AND SIGNS.
- CC. INSTALL 12 PAIR INTERCONNECT CABLE FROM PEPCO POLE 753452-6758 (COIL 30' AT POLE BASE) TO PEPCO POLE 753452-8462 AND TO SIGNAL CABINET. MONTGOMERY COUNTY FORCES SHALL COMPLETE ALL SPLICES IN THE EXISTING SPLICE BOX AT PEPCO POLE 753452-6758. REMOVE EXISTING 1/C CABLE WHEN PROJECT IS COMPLETE.
- DD. INSTALL METERED SERVICE PEDESTAL.
- EE. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- FF. INSTALL 12 PAIR INTERCONNECT CABLE FROM UTILITY POLE INTO CABINET IN A 2 INCH SCHEDULE 80 PVC CONDUIT.



**PROPOSED VIDEO DETECTION**

a, c, d, e, f, g



**NOTE:**

PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.  
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

**GENERAL NOTES**

- VIDEO CAMERA LOCATIONS/ALIGNING SHALL BE COORDINATED WITH THE PROJECT ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABELING EACH CABLE.
- THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
- ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTION, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 108.01, MD 108.02 AND MD 108.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL PROPOSED EQUIPMENT.
- MONTGOMERY COUNTY DP&T WILL BE RESPONSIBLE FOR ALL SURVEILLANCE CAMERAS IN THE PROJECT LIMITS. THE CONTRACTOR SHALL CONTACT MR. KAMAL HAMUD AT (240) 777-8761 72 HOURS PRIOR TO WORKING ON A SURVEILLANCE CAMERA LOCATION.
- RIGHT OF WAY LINES ARE BASED ON INFORMATION FROM PRIOR PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SIGNAL DURING THE COMPLETE CONSTRUCTION PERIOD.
- PUSHBUTTONS ARE TO BE LOCATED TO A LEVEL (1:48) LANDING (60"x60") ALONG THE PEDESTRIAN ACCESS ROUTE LEADING TO THE CROSSWALK.
- ADA CURB RAMPS AND DETECTABLE WARNING SURFACE ARE TO BE INSTALLED.
- TRAFFIC SIGNAL POLE FOUNDATIONS SHALL BE INCORPORATED IN THE SIDEWALK OR CURB AS DIRECTED BY THE ENGINEER TO ALLOW FOR PUSHBUTTON ACCESS.
- THE CONTRACTOR SHALL CONTACT ED RODENHIZER 410-787-7652 AT THE SIGNAL SHOP TO DELIVER APS EQUIPMENT FOR TESTING.
- THE CONTRACTOR SHALL INSTALL ALL CONDUITS PRIOR TO INSTALLING NEW SIDEWALKS AND DETECTABLE WARNING SURFACES.

**APS PUSHBUTTON NOTES**

- A. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60"x60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
- B. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
- C. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG 4E.2 AND NCHRP PUBLICATION. "ACCESSIBLE PEDESTRIAN SIGNAL: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED AND APPROVED BY THE DIRECTOR OF OFFICE OF TRAFFIC AND SAFETY.
- D. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.

TOD NO: XX655-19  
SHA NO: M0972B5D  
MD 189; Great Falls Rd/Md Ave/Potomac Valley Rd

GEOMETRIC LEGEND	
—	EXISTING
—	PROPOSED
UTILITY LEGEND	
—SD—	STORM DRAIN
—G—	GAS MAIN
—W—	WATER MAIN
—S—	SEWER MAIN
—E—	ELECTRIC CABLES
—A—	AERIAL CABLES
—T—	TELEPHONE CABLES
—F—	FIBER-OPTIC

**KCI TECHNOLOGIES**

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PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

936 RIDGEBROOK ROAD  
SPARKS, MARYLAND 21152  
TELEPHONE: (410) 316-7800  
FAX: (410) 316-7818

**APPROVALS**

TEAM LEADER

ASST. DIV. CHIEF

DIVISION CHIEF

OFFICE DIRECTOR

**REVISIONS**

B RE-INSTALL SIGNAL CONTROL TO SB MD 189 RT AND ALT PED PHASE 2 6-10-86

C SIGNAL ADJUSTMENT DUE TO GEOMETRIC IMPROVEMENTS 10-9-2010

DATE: 02/22/12 TMS NO. K523

KCI

<b>SNA</b>		STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION	
MD 189 FALLS/MARYLAND AVENUE @ GREAT FALLS RD/POTOMAC VALLEY RD			
<b>TRAFFIC SIGNAL PLAN</b>			
SCALE: 1" = 20' ADVERTISED DATE: 7-2-86 CONTRACT NO. M-293-501-372			
DESIGNED BY	A FISHEL	COUNTY	MONTGOMERY
DRAWN BY	H.A. SAVOY	LOGMILE	15018905.05
CHECKED BY		TMS NO.	
F.A.P. NO.		TOD NO.	
TS NO. 2143D	DRAWING SG - 1	OF 2	SHEET NO. 1 OF 3

PLOTTED: "01:17 PM on Wednesday, February 15, 2012"  
FILE: M:\2009\01090819.15\Drawings\SG-P001\_MD189.dgn